by page 8, line 26, to page 10, line 8 of the original specification. Claim 28 is fully supported by original claims 22, 1, and 3 and by page 11, line 31, to page 12, line 17 of the original specification. Claim 29 is fully supported by original claims 22, 2, and 3 and by page 11, line 31, to page 12, line 17 of the original specification.

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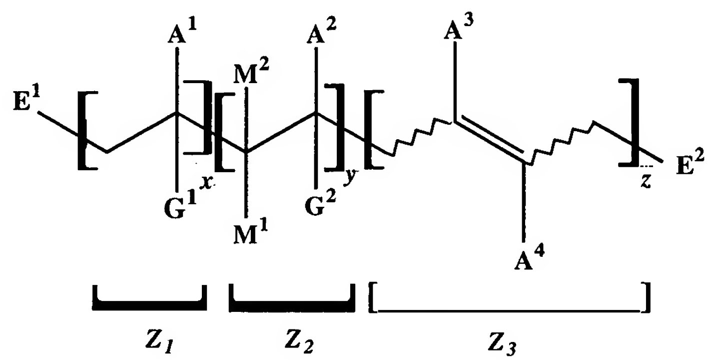
All Claims: Full Text and Status

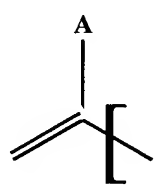
20(previously amended). A mixture, comprising:

(1) about 50 to 90% by weight, based on the weight of the mixture, of a first oligomer having terminal unsaturation of Formula (I):



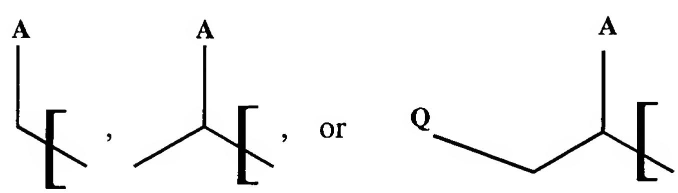
(I)

where at least one of E^1 and E^2 is an endgroup of the formula:



(II)

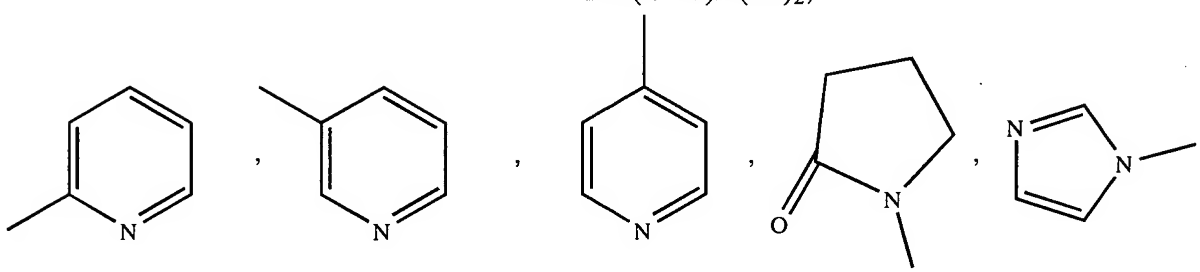
and when only one of said E^1 and E^2 is an endgroup of Formula (II) then said other of said E^1 and E^2 is selected independently from H,



and where

A, A^1 and A^2 = independently selected from -H;
C_1-C_{50} straight-chain or branched alkyl, optionally substituted with a **Y** group;
C_2-C_{50} straight-chain or branched alkenyl containing 1-5 double bonds, optionally substituted with 1-2 **Y** groups;

C_5-C_8 cycloalkyl, C_5-C_8 cycloalkenyl;
phenyl, $(CH_2)_m$-phenyl, 1- or 2-naphthyl;
$-(C{=}O)H$; $-C(OR^1)_2H$;
$-(C{=}O)\mathbf{R}^1$, $-(C{=}O)CF_3$; $-C(O\mathbf{R}^1)_2\mathbf{R}^1$;
$-(C{=}O)O\mathbf{R}$, $-O(C{=}O)\mathbf{R}^1$; $-(C{=}O)Cl$;
$-O(C{=}O)O\mathbf{R}^1$; $-O\mathbf{R}$;
$-(C{=}O)NH_2$, $-(C{=}O)NH\mathbf{R}^1$, $-(C{=}O)N(\mathbf{R}^1)_2$,
$-NH(C{=}O)\mathbf{R}^1$, $-NH(C{=}O)H$,
$-(C{=}O)NH(CH_2)_m(NH_3)^{(+)}(\mathbf{X})^{(-)}$,
$-(C{=}O)NH(CH_2)_m(N\mathbf{R}^1)_2$;
$-Si(O\mathbf{R}^1)_3$, $-Si(O\mathbf{R}^1)_2\mathbf{R}^1$, $-Si(O\mathbf{R}^1)(\mathbf{R}^1)_2$,
$-Si(\mathbf{R}^1)_3$;
-F, -Cl, -Br, -I;
$-C{\equiv}N$; oxiranyl;
$-NH(C{=}O)NH_2$, $-NH(C{=}O)NH\mathbf{R}^1$,
$-NH(C{=}O)N(\mathbf{R}^1)_2$;



$-CH_2C_nF_{2n+1}$, $-CH_2CH_2C_nF_{2n+1}$, $-CH(CF_3)_2$, $-CH_2C_nF_{2n}H$, $-CH_2CH_2C_nF_{2n}H$;
$-P({=}O)(O\mathbf{R}^1)_3$; $-S({=}O)_2(O\mathbf{R}^1)$; $-S({=}O)_2\mathbf{R}^1$;

A^3, A^4= independently selected from -H, -F, -Cl, -Br, $\mathbf{R}^1$;

G^1, G^2 = independently selected from -H, $-CH_3$, $-(CH_2)_mCO_2\mathbf{R}^1$, -F, -Cl, -Br, -I;

M^1, M^2 = independently selected from -H, $-C{\equiv}N$, $-(C{=}O)O\mathbf{R}^1$, -F, -Cl, -Br, -I;

Q = C_1-C_8 straight-chain or branched alkyl, $-O\mathbf{R}^3$, residue from radical decomposition of azo initiators (azonitrile, azoamidine, cyclic azoamidine, azoamide, azoalkyl classes) such as $-C(\mathbf{R}^4)_2C{\equiv}N$;

R = C_1-C_{50} straight-chain or branched alkyl,
C_2-C_{50} straight-chain or branched alkenyl containing 1-5 double bonds;
C_5-C_8 cycloalkyl, C_5-C_8 cycloalkenyl;
phenyl, $(CH_2)_m$-phenyl, 1- or 2-naphthyl,

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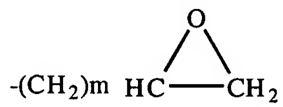
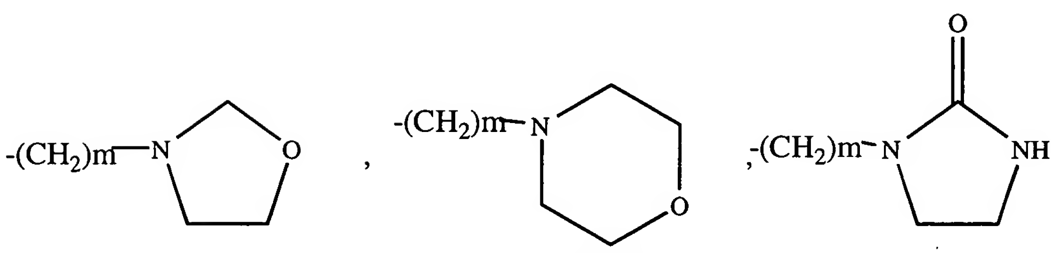
-4-benzoylphenyl (where any phenyl group may be substituted with up to 2 **R**^{2}), anthracenyl, anthracenylmethyl;
-$(CH_2)_mO(C{=}O)$**R**^{1}, -$(CH_2)_m(C{=}O)O$**R**^{1};
-$(CH_2)_m(C{=}O)$**R**^{1};
-$(CH_2)_m(C{=}O)NH_2$, -$(CH_2)_m(C{=}O)NH$**R**^{1},
-$(CH_2)_m(C{=}O)NH($**R**$^1)_2$;
-$(CH_2)_mN($**R**$^1)_2$, -$(CH_2)_mNH_3^{(+)}$**X**$^{(-)}$;
-$(CH_2)_mO$**R**^{1}, -$(CH_2CH_2O)_m$**R**^{1}, -$(CH_2CH(CH_3)O)_m$**R**^{1},
-2-tetrahydrofuranyl;
-$(CH_2)_mN{=}C{=}O$;
-$CH_2C_nF_{2n+1}$, -$CH_2CH_2C_nF_{2n+1}$, -$CH(CF_3)_2$, -$CH_2C_nF_{2n}H$,
-$CH_2CH_2C_nF_{2n}H$;


, linear alkanes containing 1-5 epoxy groups derived from (poly)unsaturated vegetable oils;
-$(CH_2)_pOH$, -$(CH_2CH_2O)_mH$, -$[CH_2CH(CH_3)O]_mH$;
-$(CH_2)_mSi(O$**R**$^1)_3$, -$(CH_2)_mSi($**R**$^1)(O$**R**$^1)_2$,
-$(CH_2)_mSi($**R**$^1)_2O$**R**^{1}, -$(CH_2)_mSi($**R**$^1)_3$;



-$(CH_2)_mO(C{=}O)CH_2(C{=}O)$**R**^{1};

R^1 = independently selected from C_1-C_8 straight chain or branched alkyl where $($**R**$^1)_2$ may constitute a C_5-C_8 cycloalkyl group; phenyl, -CH_2phenyl;

R^2 = C_1-C_6 straight chain or branched alkyl, C_1-C_6 straight chain or branched alkoxy, -CHO, -(C=O)OR1, -$N($**R**$^1)_2$, -NO_2, -$(C{=}O)N($**R**$^1)_2$, -CF_3, -$(C{=}O)$**R**^{1}; -F, -Cl, -Br, -I;

R^3 = -H, C_1-C_8 straight chain or branched alkyl, -**R**^{1}(C=O), -**R**^{1}(C=O)O;

R^4 = C_1-C_{18} straight-chain alkyl, C_5-C_8 cycloalkyl wherein the two adjacent **R**^{4} groups may together form a 5-8 membered ring, C_1-C_4 alkoxy-substituted straight-chain or branched C_1-C_8 alkyl groups;

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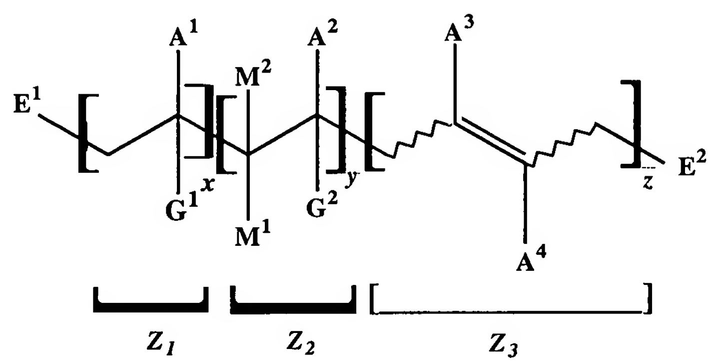
$X^{(-)}$ = $-F^{(--)}$, $-Cl^{(-)}$, $-Br^{(-)}$, $-I^{(-)}$, $-HSO_4^{(-)}$, $-H_2PO_3^{(-)}$;

Y = -OH, -F, -Cl, -Br, -I, $-NH_2$, $-N(\mathbf{R}^1)_2$;

m = 1-8
n = 1-18
p = 2-8
x = 0-49
y = 0-49
z = 0-49
$x + y + z \leq 49$; and

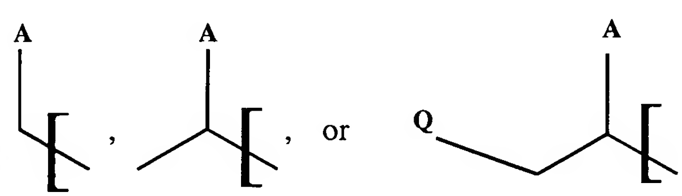
(2) about 10 to 50% by weight, based on the weight of the mixture, of a second oligomer of Formula (I),



(I)

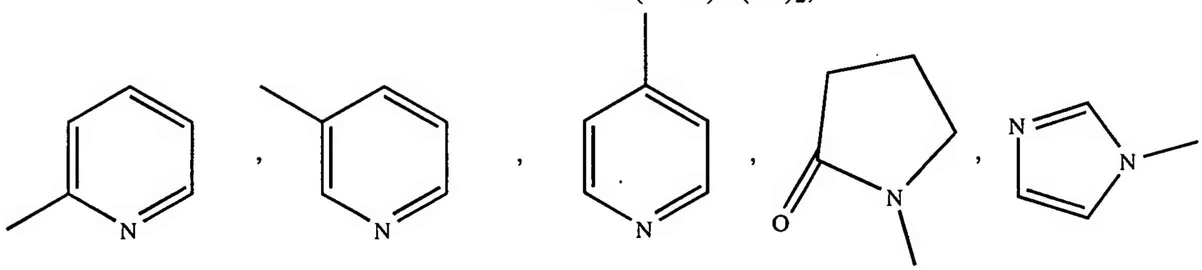
where

$\mathbf{E}^1$ and $\mathbf{E}^2$ = independently selected from H,



$\mathbf{A}$, $\mathbf{A}^1$ and $\mathbf{A}^2$ = independently selected from -H;
C_1-C_{50} straight-chain or branched alkyl, optionally substituted with a **Y** group;
C_2-C_{50} straight-chain or branched alkenyl containing 1-5 double bonds, optionally substituted with 1-2 **Y** groups;
C_5-C_8 cycloalkyl, C_5-C_8 cycloalkenyl;
phenyl, $(CH_2)_m$-phenyl, 1- or 2-naphthyl;
-(C=O)H; $-C(OR^1)_2H$;

$-(C{=}O)\mathbf{R^1}$, $-(C{=}O)CF_3$; $-C(O\mathbf{R^1})_2\mathbf{R^1}$;
$-(C{=}O)O\mathbf{R}$, $-O(C{=}O)\mathbf{R^1}$; $-(C{=}O)Cl$;
$-O(C{=}O)O\mathbf{R^1}$; $-O\mathbf{R}$;
$-(C{=}O)NH_2$, $-(C{=}O)NH\mathbf{R^1}$, $-(C{=}O)N(\mathbf{R^1})_2$,
$-NH(C{=}O)\mathbf{R^1}$, $-NH(C{=}O)H$,
$-(C{=}O)NH(CH_2)_m(NH_3)^{(+)}(\mathbf{X})^{(-)}$,
$-(C{=}O)NH(CH_2)_m(N\mathbf{R^1})_2$;
$-Si(O\mathbf{R^1})_3$, $-Si(O\mathbf{R^1})_2\mathbf{R^1}$, $-Si(O\mathbf{R^1})(\mathbf{R^1})_2$,
$-Si(\mathbf{R^1})_3$;
-F, -Cl, -Br, -I;
$-C\equiv N$; oxiranyl;
$-NH(C{=}O)NH_2$, $-NH(C{=}O)NH\mathbf{R^1}$,
$-NH(C{=}O)N(\mathbf{R^1})_2$;



$-CH_2C_nF_{2n+1}$, $-CH_2CH_2C_nF_{2n+1}$, $-CH(CF_3)_2$, $-CH_2C_nF_{2n}H$, $-CH_2CH_2C_nF_{2n}H$;
$-P({=}O)(O\mathbf{R^1})_3$; $-S({=}O)_2(O\mathbf{R^1})$; $-S({=}O)_2\mathbf{R^1}$;

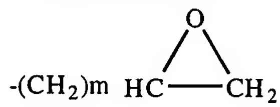
A^3, A^4 = independently selected from -H, -F, -Cl, -Br, $\mathbf{R^1}$;
G^1, G^2 = independently selected from -H, $-CH_3$, $-(CH_2)_mCO_2\mathbf{R^1}$, -F, -Cl, -Br, -I;

M^1, M^2 = independently selected from -H, $-C\equiv N$, $-(C{=}O)O\mathbf{R^1}$, -F, -Cl, -Br, -I;

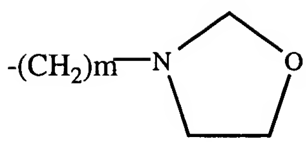
Q = C_1-C_8 straight-chain or branched alkyl, $-O\mathbf{R^3}$, residue from radical decomposition of azo initiators (azonitrile, azoamidine, cyclic azoamidine, azoamide, azoalkyl classes) such as $-C(\mathbf{R^4})_2C\equiv N$;

R = C_1-C_{50} straight-chain or branched alkyl,
C_2-C_{50} straight-chain or branched alkenyl containing 1-5 double bonds;
C_5-C_8 cycloalkyl, C_5-C_8 cycloalkenyl;
phenyl, $(CH_2)_m$-phenyl, 1- or 2-naphthyl,
-4-benzoylphenyl (where any phenyl group may be substituted with up to 2 $\mathbf{R^2}$), anthracenyl, anthracenylmethyl;
$-(CH_2)_mO(C{=}O)\mathbf{R^1}$, $-(CH_2)_m(C{=}O)O\mathbf{R^1}$;

$-(CH_2)_m(C{=}O)\mathbf{R^1}$;
$-(CH_2)_m(C{=}O)NH_2$, $-(CH_2)_m(C{=}O)NH\mathbf{R^1}$,
$-(CH_2)_m(C{=}O)NH(\mathbf{R^1})_2$;
$-(CH_2)_mN(\mathbf{R^1})_2$, $-(CH_2)_mNH_3^{(+)}\mathbf{X}^{(-)}$;
$-(CH_2)_mO\mathbf{R^1}$, $-(CH_2CH_2O)_m\mathbf{R^1}$, $-(CH_2CH(CH_3)O)_m\mathbf{R^1}$,
-2-tetrahydrofuranyl;
$-(CH_2)_mN{=}C{=}O$;
$-CH_2C_nF_{2n+1}$, $-CH_2CH_2C_nF_{2n+1}$, $-CH(CF_3)_2$, $-CH_2C_nF_{2n}H$,
$-CH_2CH_2C_nF_{2n}H$;



, linear alkanes containing 1-5 epoxy groups derived from (poly)unsaturated vegetable oils;
$-(CH_2)_pOH$, $-(CH_2CH_2O)_mH$, $-[CH_2CH(CH_3)O]_mH$;
$-(CH_2)_mSi(O\mathbf{R^1})_3$, $-(CH_2)_mSi(\mathbf{R^1})(O\mathbf{R^1})_2$,
$-(CH_2)_mSi(\mathbf{R^1})_2O\mathbf{R^1}$, $-(CH_2)_mSi(\mathbf{R^1})_3$;



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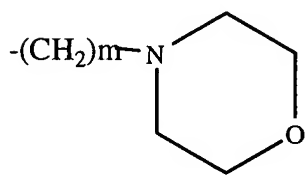

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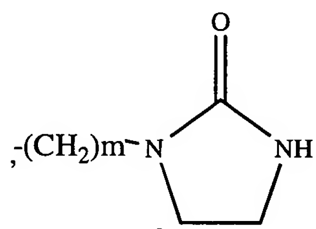


;

$-(CH_2)_mO(C{=}O)CH_2(C{=}O)\mathbf{R^1}$;

$\mathbf{R^1}$	=	independently selected from C_1-C_8 straight chain or branched alkyl where $(\mathbf{R^1})_2$ may constitute a C_5-C_8 cycloalkyl group; phenyl, -CH_2phenyl;
$\mathbf{R^2}$	=	C_1-C_6 straight chain or branched alkyl, C_1-C_6 straight chain or branched alkoxy, -CHO, -(C=O)OR1, $-N(\mathbf{R^1})_2$, $-NO_2$, $-(C{=}O)N(\mathbf{R^1})_2$, $-CF_3$, $-(C{=}O)\mathbf{R^1}$; -F, -Cl, -Br, -I;
$\mathbf{R^3}$	=	-H, C_1-C_8 straight chain or branched alkyl, $-\mathbf{R^1}(C{=}O)$, $-\mathbf{R^1}(C{=}O)O$;
$\mathbf{R^4}$	=	C_1-C_{18} straight-chain alkyl, C_5-C_8 cycloalkyl wherein the two adjacent $\mathbf{R^4}$ groups may together form a 5-8 membered ring, C_1-C_4 alkoxy-substituted straight-chain or branched C_1-C_8 alkyl groups;
$\mathbf{X}^{(-)}$	=	$-F^{(--)}$, $-Cl^{(-)}$, $-Br^{(-)}$, $-I^{(-)}$, $-HSO_4^{(-)}$, $-H_2PO_3^{(-)}$;

Y	=	-OH, -F, -Cl, -Br, -I, $-NH_2$, $-N(\mathbf{R}^1)_2$;
m	=	1-8
n	=	1-18
p	=	2-8
x	=	0-49
y	=	0-49
z	=	0-49

$x + y + z \leq 49$.

21. The mixture of claim 20 wherein said oligomers are formed from at least one ethylenically-unsaturated monomer selected from the group consisting of n-alkyl(meth)acrylates, branched alkyl(meth)acrylates, cycloalkyl (meth)acrylates, straight chain or branched haloalkyl(meth)acrylates, aromatic alkyl(meth)acrylates, aromatic (meth)acrylates, hydroxyalkyl(meth)acrylates, heterocyclyl (meth)acrylates, aminoalkyl (meth)acrylates, ether-containing (meth)acrylates, silicon-containing (meth)acrylates, (meth)acrylamides, epoxide-containing (meth)acrylates, unsaturated alkyl(meth)acrylates, (meth)acrylate esters derived from (poly)unsaturated vegetable oils, terminal alkenes, aralkenes, heterocyclyl alkenes, dienes, vinyl halides, vinyl esters, vinyl ketones, aldehyde-containing vinyl functionality, epoxyalkenes, vinyl monomers vinylsilanes, alkoxyvinylsilanes, unsaturated diesters, and functional (meth)acrylates.

22(previously canceled).

23(previously added). The mixture of claim 20 further comprising at least one surfactant and water wherein said first oligomer and said second oligomer are emulsified by said at least one surfactant in said water.

24(new). The mixture of claim 20 wherein said oligomers are formed by a process comprising the steps of:

(1) forming a reaction mixture, substantially free of solvent and carboxylic acid-monomers and their salts, comprising:

(i) 0.5 to 99.95% by weight, based on the weight of said reaction mixture, of at least one ethylenically-unsaturated monomer; and

(ii) 0.05 to 25% by weight, based on the weight of said ethylenically-unsaturated monomer, of at least one free-radical initiator; and

(2) continuously passing said reaction mixture through a heated zone wherein said reaction mixture is maintained at a temperature of at least 150°C and a pressure of at least 30 bars for from 0.1 seconds to 4 minutes to form terminally-unsaturated oligomers, and

wherein step (2) is conducted in a tubular reactor having no moving parts.

25(new). The mixture of claim 20 wherein said oligomers are formed by a process comprising the steps of:

(1) forming a reaction mixture, substantially free of carboxylic-containing monomers and their salts, comprising:

(i) 0.5 to 99.95% by weight, based on the weight of said reaction mixture, of at least one ethylenically-unsaturated monomer; and

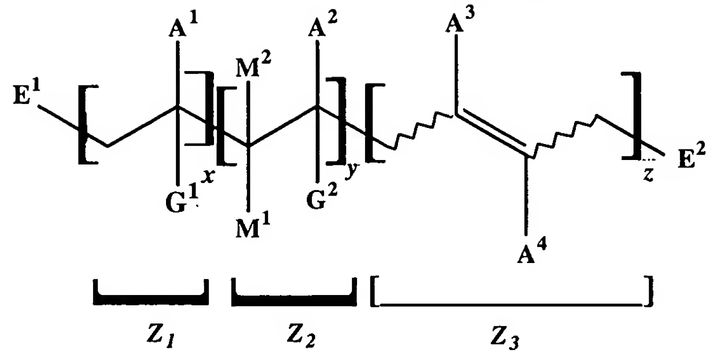
(ii) 0.05 to 25% by weight, based on the weight of said ethylenically-unsaturated monomer, of at least one free-radical initiator; and

(2) continuously passing said reaction mixture through a heated zone wherein said reaction mixture is maintained at a temperature of at least 150°C and a pressure of at least 30 bars for from 0.1 seconds to 4 minutes to form terminally-unsaturated oligomers, and

wherein step (2) is conducted in a tubular reactor having no moving parts.

26(new). A composition, comprising:

(a) at least one oligomer of the formula:

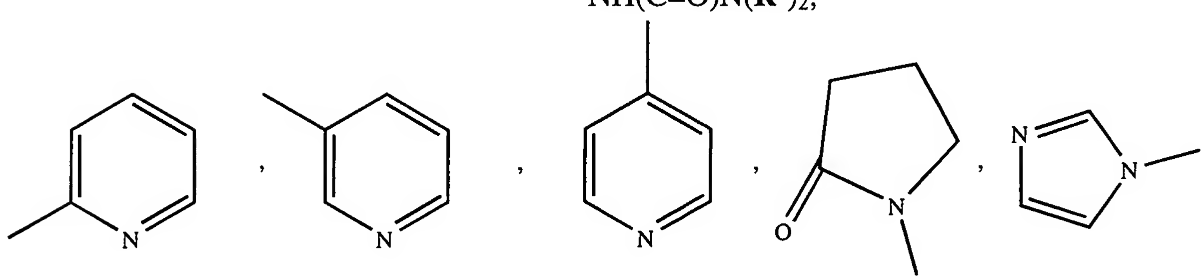


(I)

where

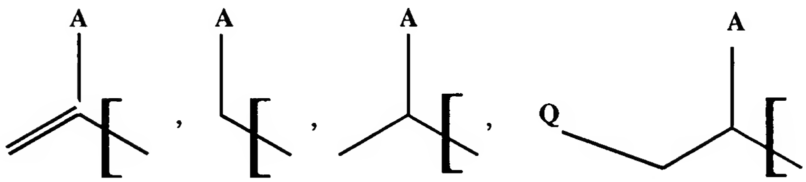
A, A[1] and A[2] = independently selected from -H;

C_1-C_{50} straight-chain or branched alkyl, optionally substituted with a **Y** group;
C_2-C_{50} straight-chain or branched alkenyl containing 1-5 double bonds, optionally substituted with 1-2 **Y** groups;
C_5-C_8 cycloalkyl, C_5-C_8 cycloalkenyl;
phenyl, $(CH_2)_m$-phenyl, 1- or 2-naphthyl;
-(C=O)H; $-C(OR^1)_2H$;
$-(C=O)\mathbf{R^1}$, $-(C=O)CF_3$; $-C(O\mathbf{R^1})_2\mathbf{R^1}$;
-(C=O)O**R**, $-O(C=O)\mathbf{R^1}$; -(C=O)Cl;
$-O(C=O)O\mathbf{R^1}$; -O**R**;
$-(C=O)NH_2$, $-(C=O)NH\mathbf{R^1}$, $-(C=O)N(\mathbf{R^1})_2$,
$-NH(C=O)\mathbf{R^1}$, -NH(C=O)H,
$-(C=O)NH(CH_2)_m(NH_3)^{(+)}(\mathbf{X})^{(-)}$,
$-(C=O)NH(CH_2)_m(N\mathbf{R^1})_2$;
$-Si(O\mathbf{R^1})_3$, $-Si(O\mathbf{R^1})_2\mathbf{R^1}$, $-Si(O\mathbf{R^1})(\mathbf{R^1})_2$,
$-Si(\mathbf{R^1})_3$;
-F, -Cl, -Br, -I;
-C≡N; oxiranyl;
$-NH(C=O)NH_2$, $-NH(C=O)NH\mathbf{R^1}$,
$-NH(C=O)N(\mathbf{R^1})_2$;



$-CH_2C_nF_{2n+1}$, $-CH_2CH_2C_nF_{2n+1}$, $-CH(CF_3)_2$, $-CH_2C_nF_{2n}H$, $-CH_2\ CH_2C_nF_{2n}H$;
$-P(=O)(O\mathbf{R}^1)_3$; $-S(=O)_2(O\mathbf{R}^1)$; $-S(=O)_2\mathbf{R}^1$;

A^3, A^4= independently selected from -H, -F, -Cl, -Br, $\mathbf{R}^1$;
E^1, E^2 = independently selected from -H,

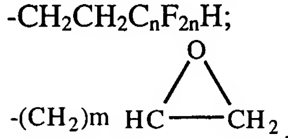


G^1, G^2 = independently selected from -H, $-CH_3$, $-(CH_2)_mCO_2\mathbf{R}^1$, -F, -Cl, -Br, -I;

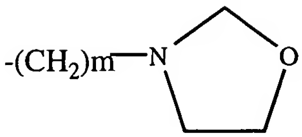
M^1, M^2 = independently selected from -H, $-C{\equiv}N$, $-(C{=}O)O\mathbf{R}^1$, -F, -Cl, -Br, -I;

Q = C_1-C_8 straight-chain or branched alkyl, $-O\mathbf{R}^3$, residue from radical decomposition of azo initiators (azonitrile, azoamidine, cyclic azoamidine, azoamide, azoalkyl classes) such as $-C(\mathbf{R}^4)_2C{\equiv}N$;

R = C_1-C_{50} straight-chain or branched alkyl,
C_2-C_{50} straight-chain or branched alkenyl containing 1-5 double bonds;
C_5-C_8 cycloalkyl, C_5-C_8 cycloalkenyl;
phenyl, $(CH_2)_m$-phenyl, 1- or 2-naphthyl,
-4-benzoylphenyl (where any phenyl group may be substituted with up to 2 $\mathbf{R}^2$), anthracenyl, anthracenylmethyl;
$-(CH_2)_mO(C{=}O)\mathbf{R}^1$, $-(CH_2)_m(C{=}O)O\mathbf{R}^1$;
$-(CH_2)_m(C{=}O)\mathbf{R}^1$;
$-(CH_2)_m(C{=}O)NH_2$, $-(CH_2)_m(C{=}O)NH\mathbf{R}^1$,
$-(CH_2)_m(C{=}O)NH(\mathbf{R}^1)_2$;
$-(CH_2)_mN(\mathbf{R}^1)_2$, $-(CH_2)_mNH_3^{(+)}\mathbf{X}^{(-)}$;
$-(CH_2)_mO\mathbf{R}^1$, $-(CH_2CH_2O)_m\mathbf{R}^1$, $-(CH_2CH(CH_3)O)_m\mathbf{R}^1$,
-2-tetrahydrofuranyl;
$-(CH_2)_mN{=}C{=}O$;
$-CH_2C_nF_{2n+1}$, $-CH_2CH_2C_nF_{2n+1}$, $-CH(CF_3)_2$, $-CH_2C_nF_{2n}H$,
$-CH_2CH_2C_nF_{2n}H$;

, linear alkanes containing 1-5 epoxy groups derived from (poly)unsaturated vegetable oils;
$-(CH_2)_pOH$, $-(CH_2CH_2O)_mH$, $-[CH_2CH(CH_3)O]_mH$;

$-(CH_2)_mSi(O\mathbf{R}^1)_3$, $-(CH_2)_mSi(\mathbf{R}^1)(O\mathbf{R}^1)_2$, $-(CH_2)_mSi(\mathbf{R}^1)_2O\mathbf{R}^1$, $-(CH_2)_mSi(\mathbf{R}^1)_3$;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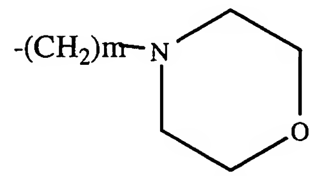
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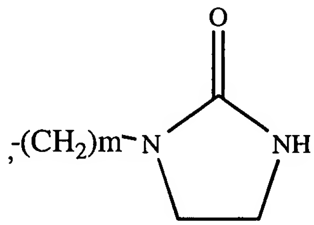
;

$-(CH_2)_mO(C{=}O)CH_2(C{=}O)\mathbf{R}^1$;

R^1 = independently selected from C_1-C_8 straight chain or branched alkyl where $(\mathbf{R}^1)_2$ may constitute a C_5-C_8 cycloalkyl group; phenyl, -CH_2phenyl;

R^2 = C_1-C_6 straight chain or branched alkyl, C_1-C_6 straight chain or branched alkoxy, -CHO, -(C=O)OR1, $-N(\mathbf{R}^1)_2$, $-NO_2$, $-(C{=}O)N(\mathbf{R}^1)_2$, $-CF_3$, $-(C{=}O)\mathbf{R}^1$; -F, -Cl, -Br, -I;

R^3 = -H, C_1-C_8 straight chain or branched alkyl, $-\mathbf{R}^1(C{=}O)$, $-\mathbf{R}^1(C{=}O)O$;

R^4 = C_1-C_{18} straight-chain alkyl, C_5-C_8 cycloalkyl wherein the two adjacent $\mathbf{R}^4$ groups may together form a 5-8 membered ring, C_1-C_4 alkoxy-substituted straight-chain or branched C_1-C_8 alkyl groups;

$X^{(-)}$ = $-F^{(--)}$, $-Cl^{(-)}$, $-Br^{(-)}$, $-I^{(-)}$, $-HSO_4^{(-)}$, $-H_2PO_3^{(-)}$;

Y = -OH, -F, -Cl, -Br, -I, $-NH_2$, $-N(\mathbf{R}^1)_2$;

m = 1-8
n = 1-18
p = 2-8
x = 0-49
y = 0-49
z = 0-49
$x + y + z \leq 49$;

(b) at least one surfactant; and

(c) water.

27(new). The composition of claim 26 wherein said oligomers are formed from at least one ethylenically-unsaturated monomer selected from the group consisting of n-alkyl(meth)acrylates, branched alkyl(meth)acrylates, cycloalkyl (meth)acrylates, straight chain or branched haloalkyl(meth)acrylates, aromatic alkyl(meth)acrylates, aromatic (meth)acrylates, hydroxyalkyl(meth)acrylates, heterocyclyl (meth)acrylates, aminoalkyl (meth)acrylates, ether-containing (meth)acrylates, silicon-containing (meth)acrylates, (meth)acrylamides, epoxide-containing (meth)acrylates, unsaturated alkyl(meth)acrylates, (meth)acrylate esters derived from (poly)unsaturated vegetable oils, terminal alkenes, aralkenes, heterocyclyl alkenes, dienes, vinyl halides, vinyl esters, vinyl ketones, aldehyde-containing vinyl functionality, epoxyalkenes, vinyl monomers vinylsilanes, alkoxyvinylsilanes, unsaturated diesters, and functional (meth)acrylates.

28(new). The composition of claim 26 wherein said oligomer is formed by a process comprising the steps of:

(1) forming a reaction mixture, substantially free of solvent and carboxylic acid-monomers and their salts, comprising:

(i) 0.5 to 99.95% by weight, based on the weight of said reaction mixture, of at least one ethylenically-unsaturated monomer; and

(ii) 0.05 to 25% by weight, based on the weight of said ethylenically-unsaturated monomer, of at least one free-radical initiator; and

(2) continuously passing said reaction mixture through a heated zone wherein said reaction mixture is maintained at a temperature of at least 150°C and a pressure of at least 30 bars for from 0.1 seconds to 4 minutes to form terminally-unsaturated oligomers, and

wherein step (2) is conducted in a tubular reactor having no moving parts.

29(new). The composition of claim 26 wherein said oligomer is formed by a process comprising the steps of:

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(1) forming a reaction mixture, substantially free of carboxylic-containing monomers and their salts, comprising:

(i) 0.5 to 99.95% by weight, based on the weight of said reaction mixture, of at least one ethylenically-unsaturated monomer; and

(ii) 0.05 to 25% by weight, based on the weight of said ethylenically-unsaturated monomer, of at least one free-radical initiator; and

(2) continuously passing said reaction mixture through a heated zone wherein said reaction mixture is maintained at a temperature of at least 150°C and a pressure of at least 30 bars for from 0.1 seconds to 4 minutes to form terminally-unsaturated oligomers, and

wherein step (2) is conducted in a tubular reactor having no moving parts.